

REMARKS

The Applicants thank the Examiner for the thorough consideration given the present application. Claims 2 and 3 are cancelled herein without prejudice to or disclaimer of the subject matter contained therein. Claims 1 and 4-9 are pending. Claims 1, 4, 5, and 7 are amended. Claims 1 and 7 are independent. The Examiner is respectfully requested to reconsider the rejections in view of the amendments and remarks set forth herein.

Examiner Interview

If, during further examination of the present application, any further discussion with the Applicants' Representative would advance the prosecution of the present application, the Examiner is encouraged to contact Carl T. Thomsen, at 1-703-208-4030 (direct line) at his convenience.

Drawings

It is gratefully appreciated that the Examiner has accepted the drawings.

Claim for Priority

The Examiner has acknowledged the Applicants' claim for foreign priority based on Japanese Patent Application No. 2003-11070 filed on January 20, 2003.

Information Disclosure Citation

The Applicants thank the Examiner for considering the reference supplied with the Information Disclosure Statement filed May 7, 2007, and for providing the Applicants with an initialed copy of the PTO/SB/08 form filed therewith.

Rejection Under 35 U.S.C. § 112, second paragraph

Claims 3 and 4 stand rejected under 35 U.S.C. § 112, second paragraph. This rejection is respectfully traversed.

The Examiner has set forth certain instances wherein the claim language is not clearly understood.

In order to overcome this rejection, the Applicants have cancelled claim 3 and have amended claim 4 to correct each of the deficiencies specifically pointed out by the Examiner. The Applicants respectfully submit that the claims, as amended, particularly point out and distinctly claim the subject matter which the Applicants regard as the invention. Accordingly, reconsideration and withdrawal of this rejection are respectfully requested.

Rejections Under 35 U.S.C. §102(b) and 103(a)

Claims 1-4 stand rejected under 35 U.S.C. §102(b) as being anticipated by Arishiro (U.S. 2001/0008061); and

claims 1, 2, and 7-9 stand rejected under 35 U.S.C. §102(b) as being anticipated by Mori (U.S. 5,191,218); and

claims 5 and 6 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Mori.

These rejections are respectfully traversed.

Amendments to Independent Claims 1 and 7

While not conceding the appropriateness of the Examiner's rejection, but merely to advance prosecution of the present application, independent claim 1 has been amended herein to recite a combination of elements in a vacuum suction system, including *inter alia*

“a vacuum level adjustment mechanism connected to the vacuum leak generation part, including a negative pressure sensor to detect a vacuum level of the vacuum leak generation part, and an adjustment part to adjust the vacuum level of the vacuum leak generation part based on a signal from the negative pressure sensor,

wherein the vacuum leak generation part includes a table base disposed on a side of the vacuum generation mechanism, a vacuum suction channel, a conveyor table rotatably mounted on the table base, and a work receiving opening for receiving a work,

the work receiving opening being connected to the vacuum suction channel,

the negative pressure sensor detecting the vacuum level of the work receiving opening of the conveyor table, and

the adjustment part adjusting the vacuum level of the work receiving opening.”

In addition, independent 7 has been amended herein to recite a combination of steps in a method for controlling a vacuum suction system, including *inter alia*

“a vacuum level adjustment mechanism connected to the vacuum leak generation part for adjusting a vacuum level of the vacuum leakage generation part, and including a negative pressure sensor to detect the vacuum level of the vacuum leak generation part, a compressed air generation source, and an adjustment part,

wherein the vacuum leak generation part includes a table base disposed on a side of the vacuum generation mechanism, a vacuum suction channel, a conveyor table rotatably mounted on the table base, and a work receiving opening for receiving a work,

the work receiving opening being connected to the vacuum suction channel,

the negative pressure sensor detecting the vacuum level of the work receiving opening of the conveyor table, and

the adjustment part adjusting the vacuum level of the work receiving opening.”

Advantages obtained by the above features include the following:

In general, the vacuum level of the opening of the conveyor tables varies in accordance with the work load rate of works.

According to the present invention, the negative pressure sensor can detect the vacuum level of the working receiving opening of the conveyor table, and then the adjustment part can adjust the vacuum level of the work receiving opening of the conveyor table based on the signal from the negative pressure sensor.

Therefore, the vacuum level of the opening of the conveyor table can be stable regardless of the work load rate of works (high work load rate or low work load rate).

In contrast to the combination of features set forth in each of independent claims 1 and 7, the references cited by the Examiner as deficient at least for the following reasons:

The Arishiro document merely discloses an index table including a plurality of holding recesses 12, and a vacuum source 35 connected to the holding recesses 12. However, Arishiro does not disclose that a negative pressure sensor is provided for detecting the vacuum level of the work receiving opening of the conveyer table, or that the adjustment part is provided for adjusting the vacuum level of the work receiving opening of the conveyor table based on a signal from the negative pressure sensor.

In addition, although reference numeral 37 of the Arishiro document may be a control valve, the Arishiro document is silent as to whether reference numeral 37 represents a negative pressure sensor.

Although the Mori document discloses a vacuum chuck, the vacuum chucks of the Mori document are for chucking wafers.

This is to say, Mori fails to teach that the vacuum leak generation part includes a table base with a vacuum suction channel, and a conveyor table rotatably mounted on the table base, having a work opening for receiving a work, the work receiving opening being connected to the vacuum suction channel.

At least for the reasons explained above, the Applicants respectfully submit that the combination of elements as set forth in independent claim 1 is not disclosed or made obvious by the prior art of record, including Arishiro (U.S. 2001/0008061) and Mori (U.S. 5,191,218)

Therefore, independent claims 1 and 7 are in condition for allowance.

Dependent Claims

The Examiner will note that dependent claims 2 and 3 have been cancelled, and dependent claims 4 and 5 have been amended.

All dependent claims are in condition for allowance due to their dependency from allowable independent claims, or due to the additional novel features set forth therein.

All pending claims are now in condition for allowance.

Accordingly, reconsideration and withdrawal of the rejections under 35 U.S.C. §102(b) and 103(a) are respectfully requested.

CONCLUSION

Since the remaining patents cited by the Examiner have not been utilized to reject claims, but merely to show the state of the art, no comment need be made with respect thereto.

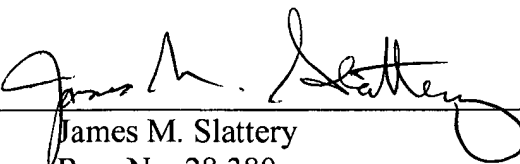
All of the stated grounds of rejection have been properly traversed, accommodated, or rendered moot. It is believed that a full and complete response has been made to the outstanding Office Action, and that the present application is in condition for allowance.

If the Examiner believes, for any reason, that personal communication will expedite prosecution of this application, he is invited to telephone Carl T. Thomsen (Reg. No. 50,786) at (703) 208-4030(direct line).

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. §§1.16 or 1.17, particularly extension of time fees.

Respectfully submitted,

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